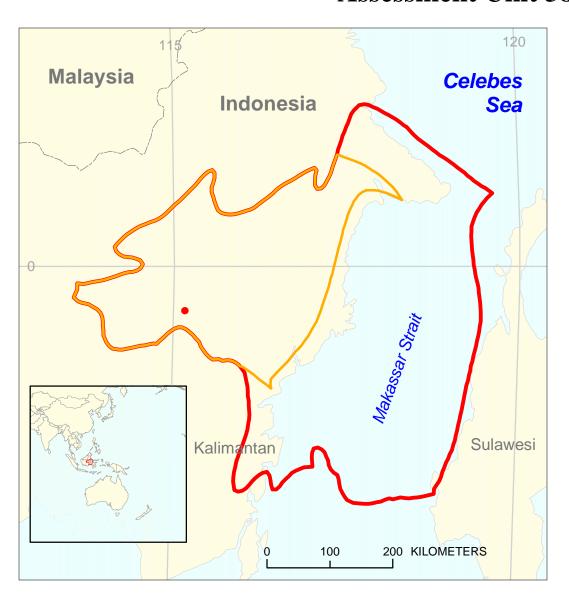
Kutei Basin Fold and Thrust Belt Assessment Unit 38170103



- Kutei Basin Fold and Thrust Belt Assessment Unit 38170103
- Kutei Basin Geologic Province 3817

USGS PROVINCE: Kutei Basin (3817) **GEOLOGIST:** P.J. McCabe

TOTAL PETROLEUM SYSTEM: Kutei Basin (381701)

ASSESSMENT UNIT: Kutei Basin Fold and Thrust Belt (38170103)

DESCRIPTION: A fold and thrust belt of Oligocene to Miocene deepwater and deltaic strata.

SOURCE ROCKS: Condensed intervals in the Oligocene bathyal strata; possibly lacustrine strata in the underlying Eocene rift deposits.

MATURATION: Late Oligocene to earliest Miocene before the main inversion tectonics of the early-mid-Miocene.

MIGRATION: Upwards along faults?

RESERVOIR ROCKS: The only field discovered to date is in Oligone carbonates but deltaic sandstones are also possible reservoirs.

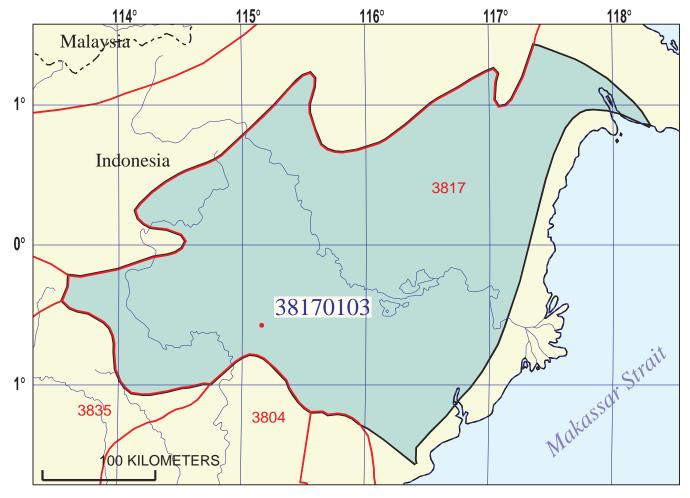
TRAPS AND SEALS: Anticlines, fault seals.

PETROLEUM INDUSTRY ACTIVITY: One gas field (Kerenden) discovered in 1982. Dense jungle makes exploration difficult.

REFERENCES:

Chambers, J.L.C., and Daley, T.E., 1997, A tectonic model for the onshore Kutai Basin, east Kalimantan, *in* Fraser, A.J., Matthews, S.J., and Murphy, R.W., eds., Petroleum geology of Southeast Asia: Geological Society Special Publication 126, p. 375-393.

Moss, S.J., Chambers, J., Cloke, I., Satria, D., Ali, J.R., Baker, S., Milsom, J., and Carter, A., 1997, New observations on the sedimentary and tectonic evolution of the Tertiary Kutai Basin, east Kalimantan, *in* Fraser, A.J., Matthews, S.J., and Murphy, R.W., eds., Petroleum geology of Southeast Asia: Geological Society Special Publication 126, p. 395-416.



Kutei Basin Fold and Thrust Belt Assessment Unit - 38170103

EXPLANATION

- Hydrography
- Shoreline

3817 — Geologic province code and boundary

- --- Country boundary
- Gas field centerpointOil field centerpoint

Assessment unit code and boundary

Projection: Robinson. Central meridian: 0

SEVENTH APPROXIMATION NEW MILLENNIUM WORLD PETROLEUM ASSESSMENT DATA FORM FOR CONVENTIONAL ASSESSMENT UNITS

| Date: | 7/29/99 | | | | | | | | | |
|---|----------------------------|----------------|--------------|--------------|-----------|----------|--|--|--|--|
| Assessment Geologist: | P.J. McCabe | | | | | | | | | |
| egion: Asia Pacific | | | | | | 3 | | | | |
| Province: | Kutei Basin | | | | | | | | | |
| | prity or Boutique Priority | | | | | | | | | |
| Total Petroleum System: | eum System: Kutei Basin | | | | | | | | | |
| | | | | | | 38170103 | | | | |
| * Notes from Assessor | Field not grown. | | | | | | | | | |
| CHARACTERISTICS OF ASSESSMENT UNIT Oil (<20,000 cfg/bo overall) or Gas (≥20,000 cfg/bo overall): Oil | | | | | | | | | | |
| What is the minimum field size?5mmboe grown (≥1mmboe) (the smallest field that has potential to be added to reserves in the next 30 years) | | | | | | | | | | |
| Number of discovered fields e Established (>13 fields) | | | Oil: H | | | 1 | | | | |
| Median size (grown) of discov Median size (grown) of discov | 1st 3rd | | 2nd 3rd_ | | 3rd 3rd | | | | | |
| Wedian size (grown) or discov | ` ; | | 2nd 3rd_ | | 3rd 3rd | | | | | |
| Assessment-Unit Probabiliti | es: | | _ | | ·f | (0.1.0) | | | | |
| Attribute 1 CHARGE: Adequate petrol | oum charge for an undi | covered field | | robability c | | 1.0 | | | | |
| 1. CHARGE: Adequate petrol | | | | | | 1.0 | | | | |
| 2. ROCKS: Adequate reservoirs, traps, and seals for an undiscovered field ≥ minimum size 3. TIMING OF GEOLOGIC EVENTS: Favorable timing for an undiscovered field ≥ minimum size | | | | | | | | | | |
| o. minito di Geologio ev | LITTO. I avoiable tillilli | g for all alla | 3covered nei | <u> </u> | 1111 3120 | 1.0 | | | | |
| Assessment-Unit GEOLOGIC | C Probability (Product of | of 1, 2, and 3 | 3): | | 1.0 | - | | | | |
| 4. ACCESSIBILITY: Adequa > minimum size | | | | | | 1.0 | | | | |
| <u> </u> | | | | | | 1.0 | | | | |
| UNDISCOVERED FIELDS Number of Undiscovered Fields: How many undiscovered fields exist that are ≥ minimum size?: (uncertainty of fixed but unknown values) | | | | | | | | | | |
| Oil fields: | , , | | median no. | 12 | max no. | 37 | | | | |
| Gas fields: | (>0) | 1 | median no | 15 | max no. | 45 | | | | |
| Size of Undiscovered Fields: What are the anticipated sizes (grown) of the above fields?: (variations in the sizes of undiscovered fields) | | | | | | | | | | |
| Oil in oil fields (mmbo) | min size | 5 | median size | 13 | max. size | 500 | | | | |
| Gas in gas fields (bcfg):min. size 30 median size 80 max. siz | | | | | | 3000 | | | | |
| (2019) | | | | | | | | | | |

Assessment Unit (name, no.) Kutei Basin Fold and Thrust Belt, 38170103

AVERAGE RATIOS FOR UNDISCOVERED FIELDS, TO ASSESS COPRODUCTS

| (uncertainty of it | Yea par allikilomi | valu c s) | |
|--|--------------------|----------------------|-------------------------------|
| Oil Fields: | minimum | median | maximum |
| Gas/oil ratio (cfg/bo) | 1400 | 2800 | 4200 |
| NGL/gas ratio (bngl/mmcfg) | 30 | 60 | 90 |
| | | | |
| Gas fields: | minimum | median | maximum |
| Liquids/gas ratio (bngl/mmcfg) | 15 | 25 | 35 |
| Oil/gas ratio (bo/mmcfg) | | | |
| SELECTED ANCILLARY D. (variations in the property) Oil Fields: API gravity (degrees) | | | maximum 47 0.15 6000 |
| Gas Fields: | minimum | median | maximum |
| Inert gas content (%) | | 1 | |
| CO ₂ content (%) | | 5 | |
| Hydrogen-sulfide content (%) | | 0 | |
| · · · · · · · · · · · · · · · · · · · | | | |

500

 2500

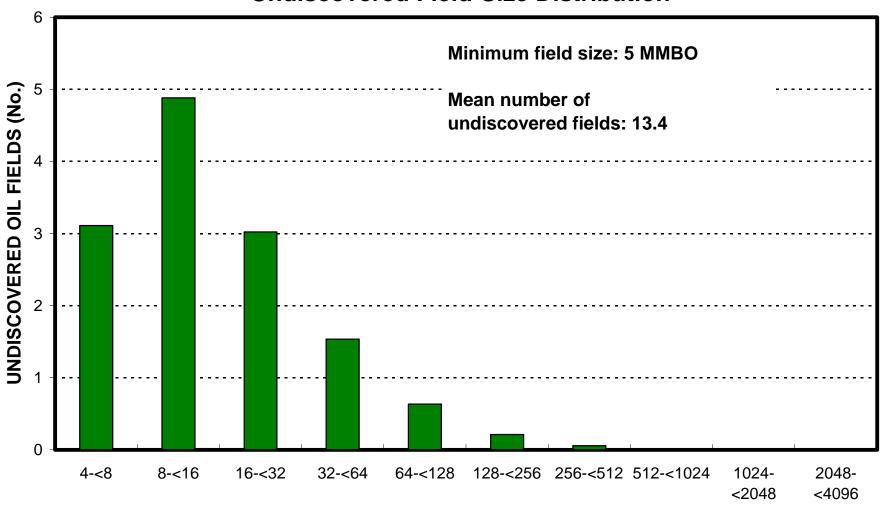
6000

Assessment Unit (name, no.) Kutei Basin Fold and Thrust Belt, 38170103

ALLOCATION OF UNDISCOVERED RESOURCES IN THE ASSESSMENT UNIT TO COUNTRIES OR OTHER LAND PARCELS (uncertainty of fixed but unknown values)

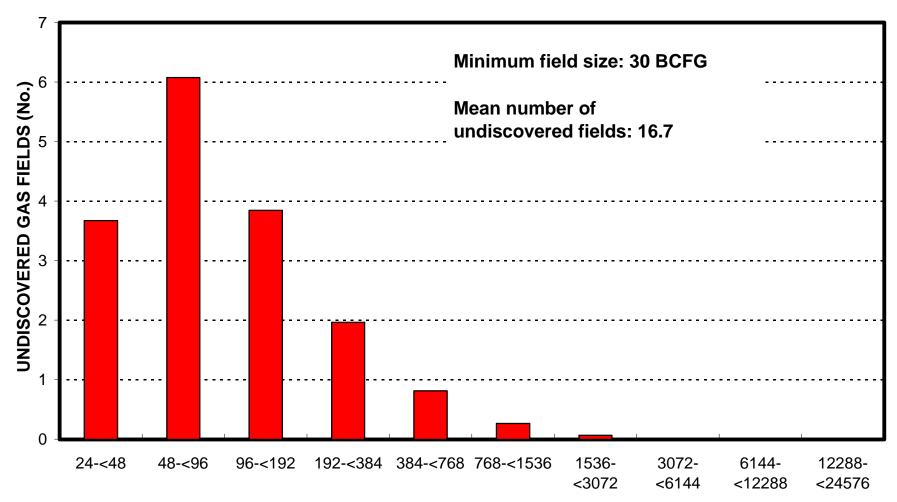
| 1. Indonesia represents | 100 | areal % of the total ass | 6 of the total assessment unit | | |
|--|---------|--------------------------|--------------------------------|--|--|
| Oil in Oil Fields: Richness factor (unitless multiplier): | minimum | median | maximum | | |
| Volume % in parcel (areal % x richness factor): Portion of volume % that is offshore (0-100%) | | 100 0 | <u></u> | | |
| Gas in Gas Fields: Richness factor (unitless multiplier): | minimum | median | maximum | | |
| Volume % in parcel (areal % x richness factor): Portion of volume % that is offshore (0-100%) | | 100 | | | |

Kutei Basin Fold and Thrust Belt, AU 38170103 Undiscovered Field-Size Distribution



OIL-FIELD SIZE (MMBO)

Kutei Basin Fold and Thrust Belt, AU 38170103 Undiscovered Field-Size Distribution



GAS-FIELD SIZE (BCFG)